

Claims

Please amend Claims 1, 11 and 16 as follows:

1. **(Currently Amended)** A regulator for outputting a pulse signal to an agricultural dispenser for applying chemicals to a field or for planting seeds, the regulator comprising:

a GPS unit for outputting a ground speed signal indicative of the velocity of the agricultural dispenser in response to satellite signals; and

a converter for converting the ground speed signal to a series of pulses having a frequency indicative of the ground speed signal and outputting the series of pulses ~~to the agricultural dispenser;~~ and

a driver for increasing a voltage level of the pulses to greater than 4 volts to the agricultural dispenser.

2. **(Original)** The regulator as defined in Claim 1, further comprising:
the GPS unit and the converter being mounted on a self-propelled vehicle; and
a wireline electrically interconnecting the converter with the dispenser positioned on a trailed implement.

3. **(Original)** The regulator as defined in Claim 1, further comprising:
a battery supported on the self-propelled vehicle; and
a cable transmits power from the battery to the dispenser and houses the wireline which connects the converter to the dispenser on the trailed implement.

4. **(Previously Amended)** The regulator as defined in Claim 1, wherein the GPS unit outputs an updated signal ground speed signal at least every two seconds.

5. **(Previously Amended)** A GPS receiver as defined in Claim 1, wherein the GPS unit outputs an updated ground speed signal at least every second.

6. **(Original)** The regulator as defined in Claim 1, further comprising:
a voltage regulator for receiving power from a battery and outputting a controlled voltage to power the GPS unit and the converter.

7. **(Original)** The regulator as defined in Claim 1, further comprising:
a driver for increasing the voltage of the series of pulses output from the converter and supplying increased voltage pulses to the dispenser.

8. **(Original)** The regulator as defined in Claim 1, wherein the converter outputs a series of pulses each having a pulse duration substantially equal to a delay between successive pulses.

9. **(Previously Amended)** The regulator as defined in Claim 1, further comprising:

an operator input controller for varying a selected rate distributor for the agricultural dispenser, the operator input controller and the ground speed signal determining the frequency of the series of pulses.

10. **(Original)** The regulator as defined in Claim 1, when a GPS unit is detachable from the converter.

11. **(Currently Amended)** A regulator for outputting a pulse signal to an agricultural dispenser for applying chemicals to a field or for planting seeds, the regulator comprising:

a GPS unit for outputting a ground speed signal indicative of the velocity of the agricultural dispenser in response to satellite signals;

a converter for converting the ground speed signal to a series of pulses having a frequency indicative of the ground speed signal and outputting the series of pulses to the agricultural dispenser;

a driver for increasing a voltage level of the pulses to greater than 4 volts to the agricultural dispenser;

the GPS unit and the converter being mounted on a self-propelled vehicle;

and

a wireline electrically interconnecting the converter with the dispenser positioned on a trailered implement.

12. **(Original)** The regulator as defined in Claim 11, further comprising:

a battery supported on self-propelled vehicle; and

a cable transmits power from the battery to the dispenser and houses the wireline which connects the converter to the dispenser on the trailered implement.

13. **(Previously Amended)** A GPS receiver as defined in Claim 11, wherein the GPS unit outputs an updated ground speed signal at least every second.

14. **(Original)** The regulator as defined in Claim 11, further comprising:
a voltage regulator for receiving power from a battery and outputting a controlled voltage to power the GPS unit and the converter; and
a driver for increasing the voltage of the series of pulses output from the converter and supplying increased voltage pulses to the dispenser.

15. **(Original)** The regulator as defined in Claim 11, wherein the converter outputs a series of pulses each having a pulse duration substantially equal to a delay between successive pulses.

16. **(Currently Amended)** A method of outputting a ground speed signal to an agricultural dispenser for applying chemicals to a field or for planting seeds, the method comprising:

providing a GPS unit for outputting a ground speed signal indicative of the velocity of the agricultural dispenser in response to satellite signals;

converting the ground speed signal to a series of pulses having a frequency indicative of the ground speed signal;~~and~~

increasing a voltage level of the pulses to greater than 4 volts; and

outputting the series of pulses to the agricultural dispenser.

17. **(Original)** The method as defined in Claim 15, further comprising:
mounting the GPS unit and the converter on a self-propelled vehicle; and
electrically interconnecting the converter with the dispenser positioned on a trailered
implement.

18. **(Original)** The method as defined in Claim 17, further comprising:
supporting a battery on the self-propelled vehicle; and
providing a cable for transmitting power from the battery to the dispenser and for
housing a wireline which connects the converter to the dispenser on the trailered
implement.

19. **(Original)** The method as defined in Claim 16, wherein the GPS unit outputs
an updated ground speed signal at least every two seconds.

20. **(Original)** The method as defined in Claim 15, wherein the converter outputs
a series of pulses each having a pulse duration substantially equal to a delay between
successive pulses.

21. **(Previously Amended)** The method as defined in Claim 15, further
comprising:

providing an operator input controller for varying a selected rate distribution for
the agricultural dispenser, the operator input controller and the ground speed signal
determining the frequency of the series of pulses.